



**US Army Corps
of Engineers**
Seattle District

Reference
Biological Assessment Form
**For Residential Overwater Structures in the Mid-
Columbia and Lower Okanogan Rivers**
Version: June 2, 2004



This reference biological assessment (RBA) applies to new residential overwater structures¹ (piers, ramps, and floats) and the replacement, repair, and modification of existing residential overwater structures in the Columbia River between Rock Island and Chief Joseph dams and in the Okanogan River from river mile 5.0 to its mouth.

1. **Referenced Biological Opinion:** *Endangered Species Act Section 7 Consultation Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation, Regional General Permit for Overwater Structures in the Mid-Columbia and Lower Okanogan Rivers*, October 4, 2003. National Marine Fisheries Service (NMFS), Northwest Region, Washington Habitat Branch (No.: NMFS Tracking 2002/01468).

Referenced Biological Evaluation: *Regional General Permit for Installation of New Residential Overwater Structures and Replacement, Repair and Modification of Existing Residential Overwater Structures in the Columbia River between Rock Island and Chief Joseph Dams and in the Okanogan River from River Mile Five to its Mouth at the Columbia River within the State of Washington*, December 5, 2002. Prepared by Jones & Stokes for the U.S. Army Corps of Engineers (Corps), Seattle District, Regulatory Branch (USFWS Reference No.: 03-W0106).

2. **Date:**

3. **Applicant:**

Corps Reference No.:

Address:

City:

State:

Zip:

4. **Agent:**

Address:

City:

State:

Zip:

5. **Location(s) of Activity:**

Quarter Section:

Section:

Township:

Range:

Latitude:

Longitude:

Street address:

Waterbody:

County:

¹ 'Overwater structures' include piers, ramps, floats, and their associated structures. Associated structures include chain and anchors for floats, ladders, and swim steps.

6. **Use type:** ☐ Private-use residential ☐ Joint-use² residential

Name and address of joint-use property owner(s):

7. **Description of project area:**

- a. What is the length of the property shoreline along the ordinary high water (OHW) mark³? What is the slope of the shoreline landward from the OHW mark? Describe the soil and land features in the area 20 feet landward of the OHW mark?
- b. Describe the vegetation along the shoreline above the OHW mark. Include the number of trees and shrubs, their species, their height, and their location. (Photos and/or drawings are recommended).
- c. Describe the substrate waterward of the OHW mark? What type of aquatic vegetation is within a 200-foot radius of the proposed pier, ramp and float? How dense is the vegetative cover (e.g., 75% vegetative cover and 25% free of vegetation)?

² Joint use requires at least two contiguous residential waterfront property owners. See Section 9, Conservation Measures 1-5 for additional joint-use requirements.

³ The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area.

- d. Describe the amount of large and small woody debris on the shoreline both above and below the OHW mark. Is there any woody debris on the adjacent properties?
- e. Describe any wetlands or wet meadows that occur within 500 feet of the project site. Wetlands and wet meadows provide habitat for Ute ladies'-tresses, an orchid listed as threatened under the Endangered Species Act. A survey for this plant may be required.

8. **Construction techniques:**

- a. Describe how the piling will be installed. Include the type of equipment, tools, and machinery you will use.
- b. How will the pier, ramp, and float be constructed and installed? What type of equipment, tools, and machinery will you use?
- c. How many days will it take to complete the work? How many hours will be required to drive piling?
- d. How will you prevent construction debris from entering the water or causing water quality degradation?

- e. What type of construction material will you use for decking, fascia boards, stringers, pile caps, and whalers? What type of preservative or paint will you use?

9. **Conservation measures to be implemented:** Implementing and abiding by the following conservation measures will ensure that the proposed project will result in only incidental take of listed species. You must check whether the proposed work will “Comply” or “Not Comply” with each conservation measure. Check “N/A” if the conservation measure is not applicable to your proposal. For example, if no heavy equipment will be used during construction, check not applicable for those conservation measures regarding heavy equipment use. Most of the conservation measures are applicable to all projects. You must also complete the column on the right with your specific project information.

Comply	Not Comply	N/A	Joint-use Proposals
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. All property owners using the proposed joint-use structure shall be listed as co-applicants and sign the application form.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. The application shall clearly state the spatial relationship of the property owners (i.e., all waterfront or a combination of waterfront and upland properties) and show the location of the various properties on the permit drawings.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Each joint-use property owner for the permit application shall provide a copy of their joint-use agreement prior to permit issuance. At a minimum, the agreement shall include a statement from each property owner that they voluntarily agree to build no overwater structures on their property except for the maintenance or modification of the joint-use overwater structure, which is the subject of the permit application.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. The permit will be issued to all joint-use property owners. The permit conditions shall be binding on all parties of the joint-use structure.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. A copy of this permit, permit drawings, mitigation planting plan (if applicable), final authorization letter, and joint-use agreement shall be recorded with the Registrar of Deeds and proof provided to the Corps, within 60 days after final Corps authorization, to ensure that subsequent property owners are aware of the construction, use, and mitigation requirements. If the authorization is for a joint-use pier, all co-applicants must voluntarily agree to build no additional overwater structures on their property, except for the maintenance or modification of the joint-use overwater structure. This voluntary agreement and the documentation described above must be recorded on the deeds of all involved properties.

Comply	Not Comply	N/A	General Construction Design	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Piers and/or ramps shall extend at least 20 feet perpendicular from the OHW mark.	Distance pier/ramp will extend:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. Piers and ramps shall be no more than 4 feet wide.	Width of pier: Width of ramp:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. The pier and/or the landward edge of the ramp shall be elevated at least two feet above the plane of OHW.	Height of pier above OHW: Height of ramp above OHW:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. Grating or clear translucent material, (e.g., acrylic or high density polyethylene, not opaque) shall cover the entire surface area of the pier and ramp. The open area ⁴ of grating must be at least 60 percent. Clear translucent material must have greater than 90 percent light transmittance as rated by the manufacturer.	Percent of surface with grating or translucent material on: Pier: % Ramp: % Percent open area of grating: % Percent light transmittance rated by manufacturer: %
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. Piling shall not exceed four inches in diameter, or five inches in diameter if encased in a polyvinylchloride (PVC) sleeve.	Piling diameter and type:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. Piling shall be white in color.	Color of piling:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. Piling shall be spaced at least 18 feet apart from one another on the same side of any component of the structure.	Minimum piling spacing:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. Each pier/float structure shall utilize no more than 10 piles for the entire structure.	Number of piling proposed:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14. All piling, mooring buoys, and navigation aids (eg., channel markers) shall be fitted with devices to prevent perching by piscivorous (fish-eating) birds.	Type of device:

⁴ The 'open area' of grating is the area enclosed between the rectangular bars and cross rods in bar grating, or the area enclosed between the bonds and strands in expanded grating. The *percent open area* is a relative measure of the degree light can pass through grating. The manufacturer may provide this value. Otherwise, it can be calculated by dividing the opening size by the sum of the opening size plus the surface area of the rectangular bars and cross rods.

Comply	Not Comply	N/A	General Construction Design	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15. Skirting shall not be placed on floats, ramps, or piers.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16. Treated wood ⁵ shall not be used for any above-water component (e.g., structural members, framing, fascia, hand railing, etc.) on the pier, ramp, or float.	Type of wood treatment, if applicable:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17. Any paint, stain, or preservatives applied to components of the overwater structure shall be completely dried or cured prior to installation.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18. Treated wood may be used for piling provided the applicant demonstrates that the water column and sediment concentrations of copper will not exceed 7 parts per billion at 55mg/L hardness and 34 parts per million, respectively, as measured by the methods presented by the NMFS ⁶ and available on the Corps' website at www.nws.usace.army.mil/reg.html .	Attach document showing modeled copper concentrations:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19. Piling treated with creosote or pentachlorophenol shall not be used.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20. Treated wood piling shall be visually inspected to detect and replace wood with surface residues and/or bleeding of preservatives.	Type of wood treatment, if applicable:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21. Treated wood piling shall incorporate design features (e.g., plastic or metal bands) to minimize abrasion of treated wood from vessels, floats, or other objects.	Describe method to prevent abrasion of treated wood piling:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	22. Projects that require removal of treated wood will take care to ensure that no treated wood debris falls into the water. If treated wood debris does fall into the water it shall be removed immediately.	

⁵ 'Treated wood' means lumber, piling, and other wood products preserved with alkaline copper quaternary (ACQ), ammoniacal copper arsenate (ACA), ammoniacal copper zinc arsenate (ACZA), copper naphthenate, or chromated copper arsenate (CCA).

⁶ Position Document for the Use of Treated Wood in Areas within Oregon Occupied by Endangered Species Act Proposed and Listed Anadromous Fish Species, National Marine Fisheries Service, December 1998.

Comply	Not Comply	N/A	General Construction Design	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	23. If existing piling will be removed: <ul style="list-style-type: none"> a. Dislodge piling with a vibratory hammer; b. After removal, place piling on construction barge or other dry storage site; c. If treated wood piling breaks during removal, either remove the stump by breaking or cutting 3 feet below the sediment surface or push the stump to that depth, then cap with clean substrate; d. Fill holes left by piling with clean native sediment. 	Method of piling removal:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24. All treated wood debris removed during the project, including treated wood piling, shall be disposed at an upland facility approved for hazardous materials of this classification. Treated wood piling shall not be left in the water or stacked on the stream bank.	Treated wood disposal site:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25. Floats shall not exceed dimensions of 8 feet wide by 20 feet long. For private-use structures a maximum of one float may be installed. A maximum of two floats may be installed for joint-use structures. Joint use requires at least two contiguous waterfront property owners as applicants for the Corps permit. (See joint-use section)	Dimension of float(s): Number of floats to be installed:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	26. Freeboard ⁷ height on floats shall be at least 10 inches.	Freeboard height:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	27. Float materials contacting the water shall be white in color or translucent.	Color of float material:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	28. Flotation materials shall be permanently encapsulated to prevent breakup into small pieces and dispersal in water.	Describe type of flotation:

⁷ 'Freeboard height' is the distance from the top of the float decking to the water surface.

Comply	Not Comply	N/A	General Construction Design	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	29. Functional ⁸ grating or clear translucent material (e.g., acrylic or high density polyethylene, not opaque) shall cover at least 50 percent of the surface area of the float. The open area of grating must be at least 60 percent. Clear translucent material must have greater than 90 percent light transmittance as rated by the manufacturer. See Appendix A for information on calculating the area of functional grating.	Percent of surface with functional grating or translucent material: % Percent open area of grating: % Percent light transmittance rated by manufacturer: %
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30. a. Floats shall not be located in shallow water where a float is likely to ground out or where moored boats will prop wash the bottom. Water depth is a measurement from the plane of OHW to the river bottom. See Appendix B for information on measuring water depth.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	b. For permanent floats, water depth at the landward edge of the float(s) shall be at least: <ul style="list-style-type: none"> • 14 feet for Rock Island and Rocky Reach Reservoirs and the Okanogan River • 24 feet for Wells Reservoir 	Water depth at landward edge of floats(s): Waterbody:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	c. For temporary floats, water depth at the landward edge of the float(s) shall be at least: <ul style="list-style-type: none"> • 7 feet for Rock Island and Rocky Reach Reservoirs and the Okanogan River • 17 feet for Wells Reservoir 	Permanent or temporary float proposed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31. Installation and construction of permanent or temporary components shall be conducted only from July 1 to February 28. The allowable construction period may be further reduced depending on the type of construction methods and the distance of the project site from the nearest bald eagle nest and bald eagle wintering concentration. See Appendix C for additional information on construction timing.	

⁸ 'Functional' grating or translucent material is material that is not covered or blocked underneath by any objects (e.g., framing wood, floatation tubs, etc.). The percent of functional grating or translucent material is in relation to the surface area of the float.

Comply	Not Comply	N/A	General Construction Design	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32. Temporary floats shall be removed annually from the water so that floats are not in the water from March 1 through June 30. The removal and installation of authorized temporary floats can occur at any time from July 1 through February 28.	

Comply	Not Comply	Preconstruction Activities
<input type="checkbox"/>	<input type="checkbox"/>	33. Construction impacts shall be confined to the minimum area needed to complete the project.
<input type="checkbox"/>	<input type="checkbox"/>	34. The boundaries of clearing limits associated with site access and construction shall be flagged to prevent ground disturbance of critical riparian vegetation, wetlands and other sensitive sites beyond the flagged boundary. This action shall be completed before significant alteration of the project area.
<input type="checkbox"/>	<input type="checkbox"/>	35. A supply of sediment control materials (e.g., silt fence, straw bales) shall be onsite. This action must be completed before significant alteration of the project area. When available, certified weed-free straw or hay bales shall be used to prevent introduction of noxious weeds.
<input type="checkbox"/>	<input type="checkbox"/>	36. All temporary erosion controls shall be in place and appropriately installed downslope of project activities within the riparian area until site restoration is complete.
<input type="checkbox"/>	<input type="checkbox"/>	37. If native vegetation is moved, damaged or destroyed, they shall be replaced with a functional equivalent during site restoration.
<input type="checkbox"/>	<input type="checkbox"/>	38. Any large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction shall be stockpiled for use during site restoration.
<input type="checkbox"/>	<input type="checkbox"/>	39. No existing habitat features (woody debris or substrate materials) shall be removed from the shore or aquatic environment. If invasive weeds (e.g., milfoil) are present, removal may occur with authorization from the Washington State Department of Fish and Wildlife.

Comply	Not Comply	Pollution and Erosion Control Measures
<input type="checkbox"/>	<input type="checkbox"/>	40. A Pollution and Erosion Control Plan (PECP) shall be prepared and carried out to prevent pollution caused by construction operations. The plan must be available for inspection by the Corps or the NMFS. The pollution and erosion control plan will contain the pertinent elements listed below, and meet requirements of all applicable laws and regulations.
<input type="checkbox"/>	<input type="checkbox"/>	41. The PECP shall list the name and address of the party(s) responsible for accomplishment of the pollution and erosion control plan.

Comply	Not Comply	Pollution and Erosion Control Measures
<input type="checkbox"/>	<input type="checkbox"/>	42. The PECP shall include practices to prevent erosion and sedimentation associated with access roads, stream crossings, drilling sites, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, staging areas, and roads being decommissioned.
<input type="checkbox"/>	<input type="checkbox"/>	43. The PECP shall include practices to confine, remove and dispose of excess concrete, cement, grout, and other mortars or bonding agents, including measures for washout facilities.
<input type="checkbox"/>	<input type="checkbox"/>	44. The PECP shall include a description of any regulated or hazardous products or materials that will be used for the project, including procedures for inventory, storage, handling, and monitoring.
<input type="checkbox"/>	<input type="checkbox"/>	45. The PECP shall include a spill containment and control plan with notification procedures, specific cleanup and disposal instructions for different products, quick response containment and cleanup measures that will be available on site, proposed methods for disposal of spilled materials, and employee training for spill containment.
<input type="checkbox"/>	<input type="checkbox"/>	46. The PECP shall include practices to prevent construction debris from dropping into any stream or water body, and to remove any material that does drop with a minimum disturbance to the streambed and water quality.

Comply	Not Comply	N/A	Heavy Equipment	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	47. A spill prevention, control, and containment (SPCC) plan shall be implemented if heavy equipment ⁹ will be used. The SPCC will include notification procedures, specific cleanup and disposal instructions for different products, quick response containment and cleanup measures that will be available on site, proposed methods for disposal of spilled materials, and employee training for spill containment. The SPCC plan for heavy equipment shall be submitted to the Corps.	SPCC plan attached?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	48. All heavy equipment will be clean and free of external oil, fuel, or other potential pollutants.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	49. Before operations begin and as often as necessary during operation all equipment to be used below OHW shall be steam cleaned until all visible external oil, grease, mud, and other visible contaminants are removed.	

⁹ 'Heavy equipment' includes, but is not limited to, bulldozers, back-end loaders, barges, jackhammers, and cement mixers.

Comply	Not Comply	N/A	Heavy Equipment	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	50. When heavy equipment is used, the equipment selected will have the least adverse effects on the environment (e.g., minimally sized, low ground pressure equipment).	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	51. Only enough supplies and equipment to complete a specific job shall be stored onsite.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	52. Vehicle staging, cleaning, maintenance, refueling, and fuel storage shall only occur in a vehicle staging area placed 150 feet or more from any stream, water body or wetland, unless otherwise approved in writing by the NMFS.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	53. All vehicles operated within 150 feet of any stream, water body or wetland shall be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected shall be repaired in the vehicle staging area before the vehicle resumes operation. Inspections shall be documented in a record for review on request by the Corps or the NMFS.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	54. All stationary power equipment (e.g., generators, cranes, stationary drilling equipment) operated within 150 feet of any stream, waterbody or wetland shall be diapered to prevent leaks, unless suitable containment is provided to prevent potential spills from entering any stream or waterbody.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	55. Heavy equipment shall work from on-shore staging areas, with the exception of an excavator arm or bucket. Pile drivers may use constructed work platforms to access construction locations (i.e., a barge).	

Comply	Not Comply	Site Restoration
<input type="checkbox"/>	<input type="checkbox"/>	56. A site restoration plan shall be prepared and carried out as necessary to ensure that all streambanks, soils and vegetation disturbed by the project are cleaned up and restored. A written restoration plan shall be available for inspection on request by the Corps or the NMFS.
<input type="checkbox"/>	<input type="checkbox"/>	57. Damaged streambanks shall be restored to a natural slope, pattern and profile suitable for establishment of permanent woody vegetation, unless precluded by pre-project conditions (e.g., a natural rock wall).
<input type="checkbox"/>	<input type="checkbox"/>	58. Areas requiring revegetation shall be replanted before the first April 15 th following construction. A diverse assemblage of species native to the project area or region, including grasses, forbs, shrubs, and trees shall be used. Noxious or invasive species shall not be used.
<input type="checkbox"/>	<input type="checkbox"/>	59. Fertilizer, pesticides, and herbicides shall not be applied to mitigation planting area.
<input type="checkbox"/>	<input type="checkbox"/>	60. Fencing shall be installed as necessary to prevent access to revegetated areas by livestock or unauthorized persons.

Comply	Not Comply	Site Restoration
<input type="checkbox"/>	<input type="checkbox"/>	61. When floating or submerged large wood debris must be moved to allow reasonable use of an overwater structure or in-water facility, the wood shall be returned to the water downstream where it will continue to provide aquatic habitat function.

Comply	Not Comply	Exclusions
<input type="checkbox"/>	<input type="checkbox"/>	62. New marinas, floating storage units, boat houses, or houseboats shall not be proposed under this RBA.
<input type="checkbox"/>	<input type="checkbox"/>	63. Proposed structures shall not occur in an exposed area requiring a breakwater, jetty, or groin.
<input type="checkbox"/>	<input type="checkbox"/>	64. New overwater structures shall not occur in areas less than 0.5 miles downstream from the mouth of the Wenatchee, Entiat, Chelan, and Methow Rivers.
<input type="checkbox"/>	<input type="checkbox"/>	65. New overwater structures shall not occur in a deposition area likely to need routine maintenance dredging (e.g., alcoves, backwater sloughs, side channels, other shallow water areas).
<input type="checkbox"/>	<input type="checkbox"/>	66. Buoys or floats shall not be placed in active anchorage and fleeting areas.

Comply	Not Comply	N/A	Mitigation	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>67. Select any of the following descriptions below that apply to the proposed project. One mitigation unit is required for each box selected¹⁰.</p> <p><input type="checkbox"/> New overwater structure.</p> <p><input type="checkbox"/> Repair, replacement, or modification of an existing structure and the footprint¹¹ of the new structure is larger than the footprint of the existing structure.</p> <p><input type="checkbox"/> Previous Corps-required mitigation has been removed from the site.</p>	Number of mitigation units required:

¹⁰ No mitigation is required if you propose to repair, replace, or modify an existing structure and the footprint of the proposed structure is smaller than, or equal to, the footprint of the original structure.

¹¹ The *footprint* of an overwater structure is the total surface area (square feet) of all the structure's components (e.g., pier, ramp and/or floats).

Comply	Not Comply	N/A	Mitigation	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>68. Each of the mitigation categories listed below is worth one mitigation unit. You must provide justification to the Corps if you cannot provide mitigation for category “a.”</p> <p>a. Planting overhanging vegetation along the shoreline immediately landward of OHW in a plot at least 20 feet long by 10 feet wide.</p> <p>b. Removal of 10 linear feet of hardened shoreline and planting overhanging vegetation in the removal area.</p> <p>c. Removal of 100 square feet of exiting in-water human-made structures (e.g., pier, piling, human made debris, concrete, asphalt, etc.) or an equivalent of what is being constructed (e.g., proposed driving of 6 piles and removal of 6 derelict piles).</p>	<p>Number of mitigation units you will provide:</p> <p>Proposed mitigation units are from category(s):</p> <p>Proposed mitigation activities must be illustrated on a plan view drawing and submitted.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>69. For mitigation planting, the planting shall include native shrubs (<i>Salix sitchensis</i>, <i>S. scouleriana</i>, <i>S. exigua</i>, <i>S. prolixa</i>, <i>S. lasiandra</i>, <i>Cornus stolonifera</i>) and trees (<i>Populus trichocarpa</i>, <i>Pinus ponderosa</i>, <i>Pseudotsuga menzeisii</i>). The use of native shrubs and trees not listed here must be approved by the Corps. The shrubs shall be planted at intervals of 3-feet on center, and the trees shall be planted at intervals of 10-feet on center. At least 2 trees and 15 shrubs shall be included in the mitigation planting. The applicant shall submit a mitigation-planting plan. The mitigation planting shall be constructed within 12 months of the Corps’ issuance of a permit for the proposed work and no later than the first April 15th following construction.</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>70. For mitigation planting, one hundred percent survival of all planted trees and shrubs is required during the first and second years after planting the mitigation units. During the third through fifth years after planting, 80 percent survival is required. The permittee must protect the mitigation units against predation - the Corps recommends fencing. Individual plants that die must be replaced with native shrubs and trees taken from the species list above.</p>	

Comply	Not Comply	N/A	Mitigation	Specific Project Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	71. A status report on mitigation construction, including as-built drawings, shall be submitted to the Corps 12 months from the date the Corps issues a permit for the proposed work. Status reports on mitigation construction will be due annually to the Corps until the Corps accepts the as-built drawings. The permittee can meet this reporting requirement by submitting to the Corps a completed <i>Status Report for Mitigation Construction</i> , which is provided in Appendix D of this document.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	72. For mitigation planting, monitoring reports will be due annually for 5 years from the date the Corps accepts the as-built drawings. The mitigation monitoring report will include written and photographic documentation on tree and shrub mortality and replanting efforts. The permittee can meet this reporting requirement by submitting to the Corps a completed <i>Mitigation Monitoring Report</i> , which is provided in Appendix E of this document.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	73. The mitigation planting shall be preserved for as long as the permitted project remains in place.	

Comply	Not Comply	General
<input type="checkbox"/>	<input type="checkbox"/>	74. If a sick, injured or dead specimen of a threatened or endangered species is found (upper Columbia River spring chinook, upper Columbia River steelhead), the finder must notify the Northwest Office of the NMFS Law Enforcement at (206) 526-6133. The finder must take care in handling of sick or injured specimens to ensure effective treatment, and in handling dead specimens to preserve biological material in the best possible condition for later analysis of cause of death. The finder also has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not disturbed unnecessarily.
<input type="checkbox"/>	<input type="checkbox"/>	75. Project operations shall cease under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.
<input type="checkbox"/>	<input type="checkbox"/>	76. The applicant shall provide the NMFS and the Corps reasonable access ¹² to the project authorized under this RBA.

¹² 'Reasonable access' means with prior notice to the applicant, the Corps and NMFS may at reasonable times and in a safe manner, enter and inspect permitted projects to insure compliance with the reasonable and prudent measures, terms and conditions, in the biological opinion referenced by this RBA.

10. **List those Conservation Measures (by number) that will not be met by this project. Describe why they will not be met:**
11. **What conservation measures will you apply to your project, if any, in addition to the measures listed in section 9?**
12. **Area (square feet) of essential fish habitat affected by the project (e.g., footprint of pier, ramp, and float):**
13. **List any additional work that you propose, waterward of the ordinary high water mark, that has not been addressed in this document:**
14. **Attachments:** Attach a vicinity map and project drawings (plan view, elevation view, and framing plan of the float illustrating the area or functional grating are required), and if applicable, a SPCC plan, a mitigation plan, and documentation regarding joint-use. Submitting site photographs is recommended.

Signature of Applicant

Date

Signature of Authorized Agent

Date

----- Below to be completed by the Corps -----

1. Threatened or endangered species present (both listed and proposed).

<u>Species</u>	<u>Effect Determination (NE, NLTAA, or LTAA)</u>	<u>Notes</u>
UCR Spring chinook		
UCR steelhead		
Columbia River bull trout		
Proposed critical habitat CR bull trout		
Grizzly bear		
Canada lynx		
Gray wolf		
Bald Eagle	Distance to nest:	
	Distance to wintering conc.:	
Ute ladies' -tresses	Distance to wetland:	

2. Work window for construction: _____ through _____

APPENDIX A

Functional Grating Requirements

For Residential Overwater Structures in the Mid-Columbia and Lower Okanogan Rivers

The conservation measures listed in the reference biological assessment will minimize adverse impacts to listed fish species and their habitat. The conservation measures list specific dimensions for the structures and for the light transmitting components. The following is information regarding these requirements and an example of how to calculate the area of functional grating.

Dimensions and Light Transmittal:

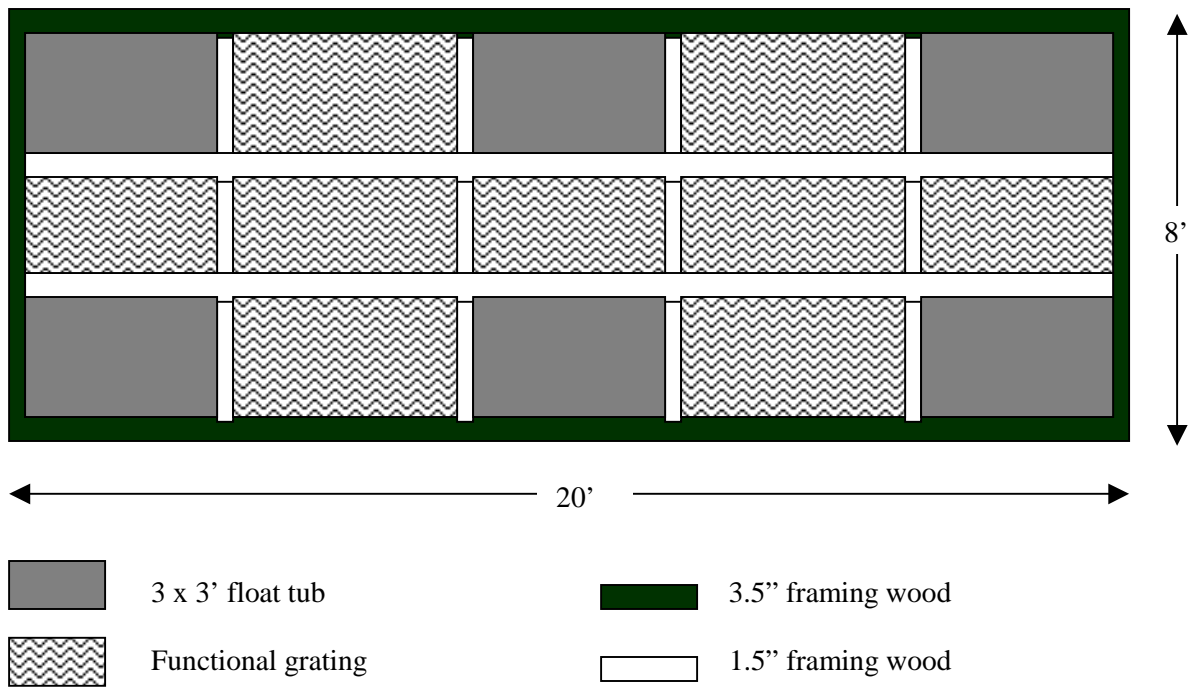
- a. Piers. Piers and ramps shall be no more than 4 feet wide and shall be elevated at least 2 feet above the plane of ordinary high water (OHW). Piers shall extend at least 20 feet perpendicular from the OHW mark. Grating or clear translucent material, (e.g., acrylic or high density polyethylene, not opaque) shall cover the entire surface area of the pier and ramp. The *open area* of grating must be at least 60 percent. Clear translucent material must have greater than 90 percent light transmittance as rated by the manufacturer. Skirting is prohibited on the pier and ramp.
- b. Floats. Floats shall not exceed dimensions of 8 feet wide by 20 feet long. For private-use structures a maximum of one float may be installed. A maximum of two floats may be install for joint-use structures. Joint use requires at least two separate property owners as applicants for the U.S. Army Corps of Engineers permit. *Functional* grating or clear translucent material (e.g., acrylic or high density polyethylene, not opaque) shall cover at least 50 percent of the surface area of the float. The open area of grating must be at least 60 percent. Clear translucent material must have greater than 90 percent light transmittance as rated by the manufacturer. Skirting is prohibited on the float.

The ‘open area’ of grating is the area enclosed between the rectangular bars and cross rods in bar grating, or the area enclosed between the bonds and strands in expanded grating. The *percent open area* is a relative measure of the degree light can pass through grating. The manufacturer may provide this value. Otherwise, it can be calculated by dividing the opening size by the sum of the opening size plus the surface area of the rectangular bars and cross rods.

‘Functional’ grating or translucent material is material that is not covered or blocked underneath by any objects (e.g., framing, flotation tubs, etc.). The percent of functional grating or translucent material is calculated relative to the surface area of the pier or float. The framing plan for the project must provide the dimensions of the framing and float tubs and the dimensions of the grated area. The framing plan drawing will be used to verify that the proposed structure meets the 50% functional grating requirement.

An example of how to calculate the percentage of functional grating is provided on the following page.

Functional grating example:



Example of calculating functional grating on a float:

The total surface area of the 8' x 20' float: 160 ft²
 Area of float tubs: 54 ft²
 Area of framing wood: 20 ft²

Area of functional grating: $160 \text{ ft}^2 - 54 \text{ ft}^2 - 20 \text{ ft}^2 = 86 \text{ ft}^2$

The percent of functional grating: $86 \text{ ft}^2 / 160 \text{ ft}^2 = 54 \%$

APPENDIX B

Water Depth Requirements

For Residential Overwater Structures in the Mid-Columbia and Lower Okanogan Rivers

The reference biological assessment (RBA) lists minimum water depth requirements for floats. The water depth requirements are to ensure that floats will not ground out and to minimize impacts of prop scour from boats on listed fish species and their habitat. Impacts to near-shore habitat can be minimized by installing floats in deep water and by extending structures away from the shore (e.g., piers). Permit applicants must assess the water depth at their project site in order to comply with the requirements of the RBA.

The surface elevation of each reservoir fluctuates seasonally based on available inputs from tributaries and the operations of the hydroelectric dams. As a result, the surface elevation of a reservoir may be above, at, or below, the ordinary high water (OHW) mark on a given day. Each reservoir has a low pool elevation as a result of seasonal draw down. The change in surface elevation between the OHW and low pool for Rock Island and Rocky Reach Reservoirs and the lower Okanogan River is 4 feet. The change in surface elevation between the OHW and low pool for Wells Reservoir is 14 feet. This seasonal change in water level was considered when establishing the water depth requirements for floats.

Water depth is a measurement from the plane of ordinary high water to the river bottom. To minimize adverse impacts from floats and boating activities the following water depth requirements have been established in the RBA:

- a. For permanent floats, water depth at the landward edge of the float(s) shall be at least:
 - 14 feet for Rock Island and Rocky Reach Reservoirs and the Lower Okanogan River
 - 24 feet for Wells Reservoir
- b. For temporary floats, water depth at the landward edge of the float(s) shall be at least:
 - 7 feet for Rock Island and Rocky Reach Reservoirs and the Lower Okanogan River
 - 17 feet for Wells Reservoir

Permanent floats may remain in the water all year. Temporary floats must be removed from the water from March 1 through June 30 each year. The removal and installation of authorized temporary floats can occur at any time from July 1 through February 28. The water depth requirements will ensure that floats will be in at least three feet of water during low pool. Removing temporary floats from the water in the spring will reduce their adverse impacts on migrating salmon.

The water depth must be measured at the landward edge of the proposed float. The example in Figure 1 is a schematic drawing of a proposed float that would be installed 25 feet from the shore (measured from the OHW mark on the bank). To measure the water depth at this site, first measure how deep the water is at the location of the landward edge of the proposed float (use a boat and plumb bob). This measurement is 8 feet in Figure 1. Next, measure the distance between the current water surface elevation and the OHW elevation. A simple way to do this is to extend a level line (use a string with an attached bubble level or use a carpenter's level) from the OHW mark on the bank to the water's edge. Measure the distance from the level line to the water's surface. This measurement is 2 feet in Figure 1. Combining these two measurements shows that the water depth from the plane of OHW to the river bottom at the landward edge of the float is 10 feet.

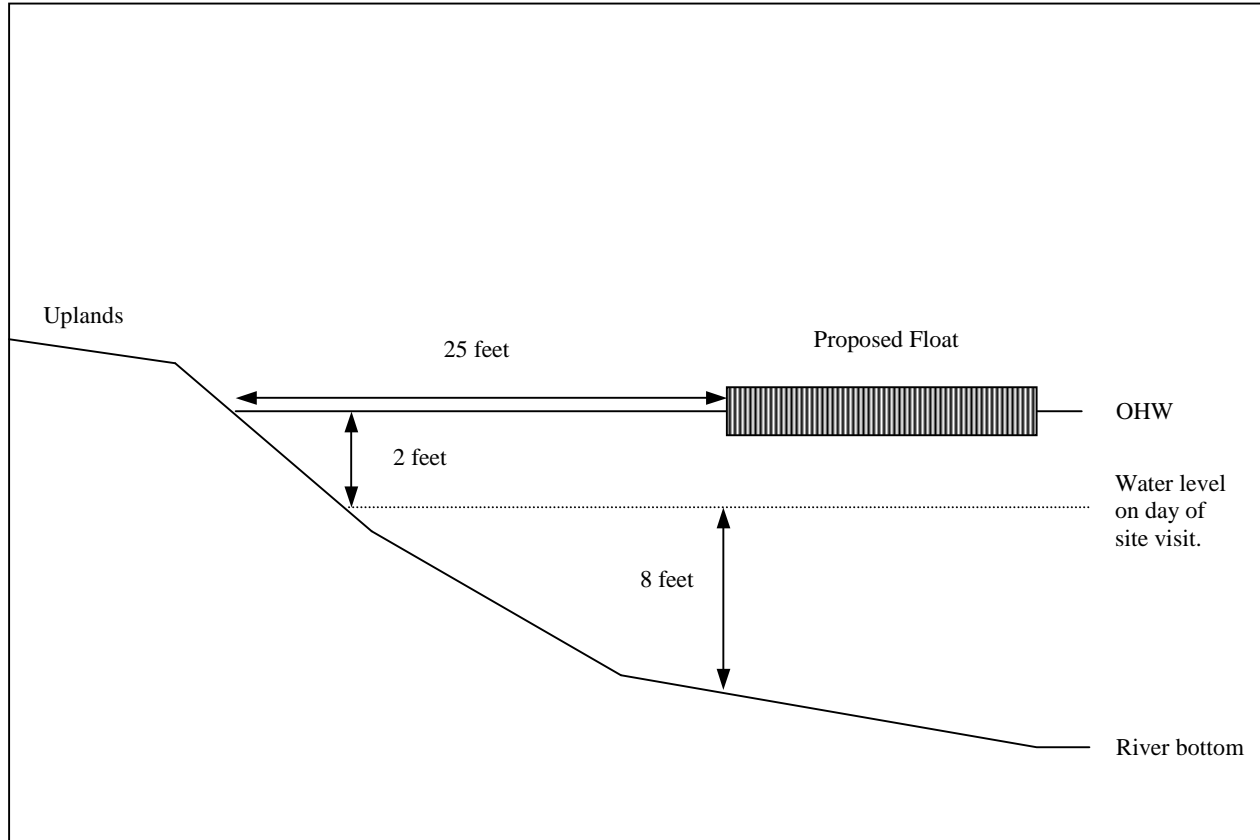


Figure 1. Schematic for water depth assessment. Assume proposed float is in Rocky Reach Reservoir. Water depth at landward edge of float is 10 feet. Thus, the proposal qualifies for a temporary float. Actual project drawings should be drawn to scale and must show all of the proposed work (e.g., pier, piling, ramp, etc.).

The float illustrated in Figure 1 would qualify for a temporary float in Rocky Reach Reservoir because the water depth exceeds 7 feet, but is less than 14 feet. The float would have to be removed from the water from March 1 through June 30 each year. The water depth at the project site should be assessed early in the planning phase to ensure the proposal can comply with the requirements of the RBA.

APPENDIX C

Construction Timing

For Residential Overwater Structures in the Mid-Columbia and Lower Okanogan Rivers

Construction is limited to specific times of the year in order to protect species listed under the Endangered Species Act. The 'work window,' or time of year when construction is allowed, depends on the type of construction that is proposed and the location of the project site. The main work window for fish species is July 1 through February 28. Variations in this work window are based on the distance of the proposed project to the nearest bald eagle nest and wintering concentration (see below). The Corps will coordinate with the U.S. Fish and Wildlife Service to determine the appropriate work window once an application is submitted. The prospective permittee must comply with the established work window. The following key is used to determine the work window:

- 1a Piles will be installed
 - 2a Pile installation will be done manually (e.g., with a sledge hammer) or with a vibratory pile driver
 - 3a Wintering bald eagle concentration is within ¼ mile of the project site
 - 4a Bald eagle nest is within ½ mile of the project site: Aug 16 – Oct 30
 - 4b No bald eagle nests within ½ mile of the project site: Jul 1 – Oct 30
 - 3b No wintering bald eagle concentrations are within ¼ mile of the project site
 - 5a Bald eagle nest is within ½ mile of the project site: Aug 16 – Dec 31
 - 5b No bald eagle nests within ½ mile of the project site: Jul 1 – Feb 28
 - 2b Pile installation will be done with an impact hammer (e.g., diesel, hydraulic)
 - 6a Wintering bald eagle concentration is within 1 mile of the project site
 - 7a Bald eagle nest within 1 mile of project site: Aug 16 – Oct 30
 - 7b No bald eagle nest within 1 mile of the project site: Jul 1 – Oct 30
 - 6b No wintering bald eagle concentrations within 1 mile of the project site
 - 8a Bald eagle nest within 1 mile of the project site: Aug 16 – Dec 31
 - 8b No bald eagle nest within 1 mile of the project site: Jul 1 – Feb 28
- 1b No piles will be installed
 - 9a Bald eagle wintering concentration within ¼ mile of the project site
 - 10a Bald eagle nest within ¼ mile of the project site: Aug 16 – Oct 30
 - 10b No bald eagle nest within ¼ mile of the project site: Jul 1 – Oct 30
 - 9b No bald eagle wintering concentration within ¼ mile of the project site
 - 11a Bald eagle nest within ¼ mile of the project site: Aug 16 – Dec 31
 - 11b No bald eagle nest within ¼ mile of the project site: Jul 1 – Feb 28

APPENDIX D

Status Report for Mitigation Construction

For Residential Overwater Structures in the Mid-Columbia and Lower Okanogan Rivers

Within one (1) year of the date your permit was issued, submit this completed form to: U.S. Army Corps of Engineers, Regulatory Branch, P.O. Box 3755, Seattle, WA 98124-3755. You must submit a new form annually until the U.S. Army Corps of Engineers (Corps) accepts your as-built drawings of the mitigation construction.

Corps Reference Number: _____

Date the Corps Issued Your Permit: _____

Date this Report is Due: _____

Units of Mitigation Required by Corps: _____

Your Name: _____

Your Address: _____

Your City/State/Zip Code: _____

You must attach to this form: ☒ As-built drawing(s) of mitigation area, and
☒ Photographs of the mitigation area.

Date overwater structures removed: _____

Date hardened shoreline removed: _____

If plantings were installed:

Each unit of mitigation requires a 20-foot long by 10-foot wide vegetation strip established along the ordinary high water (OHW) line. Conditions of your Corps permit require that you plant at least 2 trees and 15 shrubs in each mitigation unit. The vegetation you plant must be taken from the list of native species below. Shrubs should be planted at 3-feet-on-center intervals and trees should be planted at 10-feet-on-center intervals. Be sure to protect your plantings from beavers - fencing is recommended.

Name of Species You Planted	Number Planted
Total Planted:	

Native tree list: *Populus trichocarpa* (Black cottonwood), *Pinus ponderosa* (Ponderosa pine), *Pseudotsuga menziesii* (Douglas fir)

Native shrub list: *Salix sitchensis* (Sitka willow), *S. scouleriana* (Scouler's willow), *S. exigua* (Sandbar willow), *S. prolixa* (Mackenzie's willow), *S. lasiandra* (Pacific willow), *Cornus stolonifera* (Red-osier dogwood)

APPENDIX E

Mitigation Monitoring Report

For Residential Overwater Structures in the Mid-Columbia and Lower Okanogan Rivers

Submit this completed form to: U.S. Army Corps of Engineers, Regulatory Branch, P.O. Box 3755, Seattle, WA 98124-3755. A completed form must be submitted 1, 2, 3, 4 and 5 years after the U.S. Army Corps of Engineers (Corps) accepts your as-built drawing of the mitigation area.

Corps Reference Number: _____

Date Your As-Built Was Accepted by the Corps _____

Date This Report Is Due: _____

Units of Mitigation Required by the Corps: _____

Your Name: _____

Your Address: _____

Your City/State/Zip Code: _____

You must attach to this form: ☒ Photographs of the mitigation area taken within the last two months.

Conditions of your Corps permit require 100% survival of all planted trees and shrubs during the first and second years after planting. During the third through fifth years after planting, 80% survival is required. Individual plants that die must be replaced with a species from the list below. At least two trees must be planted in your mitigation area. You must protect your mitigation area against animal predation—fencing is recommended.

Date of Inspection	Species name of Dead Plants	Number of Dead Plants	Name of Species Replanted	Number Replanted

Native tree list: *Populus trichocarpa* (Black cottonwood), *Pinus ponderosa* (Ponderosa pine), *Pseudotsuga menziesii* (Douglas fir)

Native shrub list: *Salix sitchensis* (Sitka willow), *S. scouleriana* (Scouler's willow), *S. exigua* (Sandbar willow), *S. prolixa* (Mackenzie's willow), *S. lasiandra* (Pacific willow), *Cornus stolonifera* (Red-osier dogwood)